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5 APPARATUS AND METHOD FOR APPLYING MUD TO DRYWALL TAPE

This invention is in the field of construction methods and in particular methods for applying drywall mud to drywall tape.

10 BACKGROUND

15 Drywall finishing requires that joints and corners be finished by applying drywall mud thereto, allowing the mud to dry, and sanding smooth. Several coats may be required to provide a smooth finish that is satisfactory. The initial coat on a joint comprises a paper or mesh strip, commonly called drywall tape, which is coated with mud and then applied over the joint. Where the job is done by hand, a coat of mud is generally applied to the joint, the tape is pressed into this mud, and another layer of mud is applied over the tape.

20 Also known are apparatuses for applying mud to drywall tape by drawing the tape through slots on one side or each side of a pail of mud. Such apparatuses are disclosed in United States Patent Numbers 5,676,793 to Martin et al.; 5,242,495 to Hammond et al.; and 5,498,287 to Barnfield. These demonstrate a relatively simple and effective means of coating drywall tape with mud.

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If left standing in these prior art containers, paper drywall tape becomes saturated and deteriorates to the point where same can no longer withstand the force required to pull it through the container of mud. Should the drywall procedure be interrupted for a period of time, the tape may break when next the operator pulls on the free end of the tape extending from the bucket. The operator of the Barnfield or Hammond devices must then remove the mud from the container and re-thread fresh tape through the slots in the container. The Martin device does provide a feeder plate and guide for installation in the container for pulling the tape through the mud and container slots.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a simple, economical method and apparatus that allows for use of a slotted container of mud with drywall tape drawn through the slots and the mud, on an intermittent basis, such that the open container top could be sealed, and the drywall tape left threaded through the slots, for extended periods, such as from one day to the next, or longer.

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It is a further object of the invention to provide an apparatus for conveniently applying drywall mud to drywall tape.

10 The invention accomplishes the object in one aspect by providing a container with access through slots in opposing sidewalls to thread a free end of a roll of drywall tape. A free end of a roll of drywall tape is threaded from an outside of the container through a first slot, then through
15 the container, then through a second slot to the outside of the container. Drywall mud is placed into the container to a level above the drywall tape and the drywall tape is drawn through the slots, thereby coating same with drywall mud. Coated drywall tape is torn off while leaving a free end of
20 drywall tape outside the container available for grasping and pulling more drywall tape.

When the drywall process is interrupted, a strip of material, such as adhesive tape, is attached to at least one surface of
25 the drywall tape between the roll and the first slot. The strip of adhesive tape is substantially longer than the distance across the container and has a tensile strength substantially unaffected by prolonged exposure to drywall mud.

5 The drywall tape with attached adhesive tape is drawn through the first and second slots until a first end of the strip of adhesive tape extends outside the container and a second end of the adhesive tape remains between the roll and the first slot. The open top of the container is sealed and
10 the apparatus, with tape still threaded through the container may now be left for a prolonged period of time. While the drywall tape in the container will deteriorate, the adhesive tape will not.

15 When it is desired to re-commence the drywall process, the drywall tape and applied adhesive tape is drawn through the slots until the second end of the strip of adhesive tape exits the container through the second slot. The strip of adhesive tape and attached drywall tape is torn off and discarded,
20 leaving a free end of drywall tape outside the container available for grasping and pulling more drywall tape.

Some drying and solidification of the mud adjacent to the slots can occur. This can result in undesirable granules of
25 dried mud on the coated drywall tape when the process is restarted. The slots may be plugged or taped over to prevent drying of the mud. Alternatively

5 The method is suitable for small jobs, since mud coated drywall tape is always quickly available, and an apparatus can be stored for relatively lengthy periods.

10 In a second aspect the invention provides an apparatus for applying drywall mud to drywall tape, comprising a base, having a flat bottom surface, a roll end and a dispensing end; a container including an open top, sidewalls and a floor, and attached to an upper surface of the base, between the roll end and dispensing end. A first slot is defined by one sidewall facing the roll end, and a second slot is defined by an
15 opposite sidewall facing the dispensing end of the base. The slots are located in proximity to the container floor. A cover is operative to releasably seal the open top of the container. A roll feeding member extends upwards from the
20 roll end of the base. Means are provided to releasably and rotatably mount a roll of drywall tape on the roll feeding member, about a substantially horizontal axis, such that a lower extremity of the roll of drywall tape is above the bottom surface of the base.

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DESCRIPTION OF THE DRAWINGS:

5 While the invention is claimed in the concluding portions
hereof, preferred embodiments are provided in the accompanying
detailed description which may be best understood in
conjunction with the accompanying diagrams where like parts in
each of the several diagrams are labeled with like numbers,
10 and where:

Fig. 1 is a side view of an apparatus for applying mud to
drywall tape;

15 Fig. 2 is a top view of the apparatus of Fig. 1;

Figs. 4 - 4B are side views of the apparatus of Fig.1
showing the operation thereof;

20 Fig. 5 is a top view of a piece of adhesive tape applied
to a length of drywall tape;

25 Fig. 6 is a side view of a slot in a container and a
strip of drywall tape and attached plastic adhesive
strip;

Fig. 7 is an end view of the slot, a strip of drywall
tape and attached plastic adhesive strip of Fig. 6.

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DETAILED DESCRIPTION OF THE ILLUSTRATED EMBODIMENTS:

Figs. 1 and 2 illustrate an apparatus for applying drywall mud
10 to drywall tape.

The apparatus comprises a base 1, having a flat bottom surface
2 for resting on a table or floor, a roll end 3 and a
dispensing end 4. A container 5 is attached to the upper
15 surface 6 of the base 1, between the roll end 3 and the
dispensing end 4. The container 5 includes an open top 7,
sidewalls 8 and a floor 9. A first slot 10 is defined by one
sidewall 8r facing the roll end 3 of the base 1, and a second
slot 11 is defined by an opposite sidewall 8d facing the
20 dispensing end 4 of the base 1. The slots 10, 11 are located
in proximity to the floor 9 of the container 5. A cover 12 is
operative to releasably seal the open top 7 of the container
5.

25 A roll feeding member 13 extends upwards from the roll end 3
of the base 1. In the illustrated embodiment, the roll
feeding member 13 and base 2 are integral, with the roll
feeding member 13 being a bent upwards extension of the base

5 2. A roll of drywall tape 14 is releasably and rotatably mounted on the roll feeding member 13, about a substantially horizontal axis such that a lower extremity 14a of the roll of drywall tape 14 is above the bottom surface 2 of the base 1. The roll 14 may then rotate freely.

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The slots 10, 11 defined by the sidewalls 8 are substantially horizontal in the illustrated embodiment. This orientation accommodates feeding from the roll of drywall tape 14, however the slots 10, 11 could be oriented vertically or somewhere in between.

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A gap 16 is defined by the roll feeding member 13 to accommodate the roll of drywall tape 14. The means to releasably and rotatably mount the roll of drywall tape 14 comprises a horizontal rod 15 extending across the top of the gap 16. A shaft 17 is attached at each end of the rod 15 substantially perpendicular to the horizontal rod 15 and parallel to each other. In the illustrated embodiment the shafts 17 and rod 15 are integral, the shafts 17 being simply bent from the rod 15. The illustrated shafts 17 are substantially parallel and are slidably received in apertures 18 defined by the roll feeding member 13 on each side of the gap 16. The rod 15 may thus be readily removed

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5 from the apparatus for removing or replacing the roll of
drywall tape 14.

The illustrated apparatus can be used to practice the method
of the invention for applying drywall mud to drywall tape
10 allowing for lengthy stoppages in a drywall application
process.

A free end 20 of a roll of drywall tape 14 is threaded from
outside the container 5 through the first slot 10, then
15 through the container 5, then through the second slot 11 to
the outside of the container 5. Drywall mud 21 is placed into
the container 5 to a level above the drywall tape 22. The
drywall tape 22 is drawn through the slots 10, 11 thereby
coating same with drywall mud 21. The coated drywall tape 22c
20 is torn off as needed while always leaving a free end 20 of
drywall tape 22 outside the container 5 available for grasping
and pulling more drywall tape 22.

When the drywall process is interrupted, such as when the work
25 day is finished, none of the prior art allows the drywall tape
22 to be left in mud 21, as the paper drywall tape will very
quickly deteriorate by absorbing moisture from the mud 21 such
that when it is attempted to grasp the free end 20 of the

5 drywall tape 22 and pull more through the container 5, the drywall tape 22 will break. The operator must then remove mud 21 from the container 5 and re-thread drywall tape 22 through the container 5.

10 To avoid this there is attached to the drywall tape 22, between the roll 14 and the first slot 10, a strip of material having a tensile strength substantially unaffected by prolonged exposure to drywall mud 21. The strip of material is substantially longer than the distance across the container
15 5 between the first and second slots 10, 11. The strip may be attached to the drywall tape 22 by adhesives, staples or similar means.

20 The strip of material may be plastic film 23 such as is illustrated in Fig. 3, whose tensile strength is unaffected by exposure to mud 21 and is also impervious to moisture from mud 21. The plastic film 23 is attached to the drywall tape 22 by simply wrapping same around the drywall tape 22 so as to surround a portion of drywall tape 22 and prevent moisture
25 from the mud 21 contacting the portion of drywall tape 22. The seam 23s may be sealed with glue or tape. This method prevents deterioration of the drywall tape 22 and allows same to remain in the mud 21 for prolonged periods and pulled

5 through the container 5 at a later time.

Alternatively, as illustrated in Figs. 4, 4A and 4B, a strip of plastic adhesive tape 25 that is longer than the distance between the first and second slots 10, 11, is adhesively attached to one side of the drywall tape 22 between the roll 14 and the first slot 10. The attachment must be strong enough that the adhesive tape 25 will bring the drywall tape 22 with it when drawn through the slots 10, 11.

15 The drywall tape 22 with attached strip of material, such as either the plastic film 23 or adhesive tape 25, is drawn through the first and second slots 10, 11 until a first end 30 of the strip of material 23, 25 extends outside the container 5 and a second end 31 of the strip of material 23, 25 remains between the roll 14 and the first slot 10. The container 5 is sealed by installing the cover 12 on the open top 7 of the container 5. The slots 10, 11 may also be sealed with tape or plugs to prevent solidification of the mud 21 adjacent thereto and subsequent troublesome granules of dried mud adhering to
25 the drywall tape 22.

Alternatively, as illustrated in Figs. 6 and 7, the slots 10, 11 may be sealed by providing a strip of material, such as

5 plastic adhesive strip 26, that has a width substantially equal to the width of the drywall tape 22 and a thickness such that the drywall tape 22 and attached plastic adhesive strip 26 substantially fill the first and second slots 10, 11 when same are drawn therethrough, thereby substantially sealing the
10 slots 10, 11. Typically, for the common two inch wide drywall tape 22, the slots 10, 11 will be 2.125 inches wide and about .06 inches deep.

15 The apparatus may then be left standing as illustrated in Fig. 4A for a prolonged period of time. When it is desired again to coat more drywall tape 22 with mud 21, the drywall tape 22 and applied strip of material 23, 25 are drawn through the slots 10, 11 until the second end 31 of the strip of material 23, 25 exits the container 5 through the second slot 11 as ill
20 in Fig. 4B. The strip of material 23, 25 and attached portion of drywall tape 22, may then be torn off and discarded, leaving a free end 20 of drywall tape 22 outside the container 5 available for grasping and pulling more drywall tape 5 through the container 5.

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In Figs. 4, 4A and 4B, a second strip of adhesive tape 25a is adhesively attached to the drywall tape 22 on a side thereof opposite the strip of adhesive tape 25, however in most

5 situations a strip of adhesive tape 25 on one side of the
drywall tape 22 should suffice, provided the portion extending
between the roll 14 and first slot 10 is adhered strongly
enough to pull the drywall tape through the container 5. As
illustrated in Fig. 5, for maximum strength of adhesion, the
10 adhesive tape 25 has a width substantially equal to a width of
the drywall tape 22.

The foregoing is considered as illustrative only of the
principles of the invention. Further, since numerous changes
15 and modifications will readily occur to those skilled in the
art, it is not desired to limit the invention to the exact
construction and operation shown and described, and
accordingly, all such suitable changes or modifications in
structure or operation which may be resorted to are intended
20 to fall within the scope of the claimed invention.